

ROCKS and MINERALS

Official Journal of the Rocks and Minerals Association



A Magazine for Mineralogists, Geologists and Collectors

APRIL, 1946

25c

Vol. 21, No. 4

Whole No. 177

Opening of a

MINERAL STORE IN NEW YORK CITY

●

I am pleased to announce that early in April I shall open a store to deal in fine mineral specimens.

It is situated on the third floor of 110 Wall Street, New York 5, which is at the East River end of the street and readily accessible by subway, being a few minutes' walk from the station at Wall and William Streets.

My initial stock will be derived mainly from my large private collection, formed over a period of thirty years, and containing fine specimens from old European and American localities, as well as from many other parts of the world. Most of them were purchased from mineral dealers in many countries. I doubt whether so many specimens of equally high quality have been available recently to American collectors. Many rare species are included.

Collectors are cordially invited when in New York to call and look over the specimens for sale.

No lists can be furnished, but I shall welcome enquiries for specific minerals.

●

HUGH A. FORD

MINERALOGIST

110 WALL STREET

NEW YORK 5, N. Y.

ROCKS and MINERALS

PUBLISHED
MONTHLY



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PETER ZODAC

April
1946

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ROCKS and MINERALS

PEEKSKILL, N. Y., U. S. A.

The official Journal of the Rocks and Minerals Association

CHIPS FROM THE QUARRY

FEDERATION CONVENTION, JUNE 14-16, 1946

Advance reservations for space from societies and dealers indicate a record participation in the June convention of the California Federation of Mineralogical Societies. An urgent request has been received from Jack Streeter, president of the Mineralogical Society of Southern California, host organization, for all groups and individuals entering exhibits for competition to make early space reservations with Willard J. Perkin, 362 W. Cedar Ave., Burbank, Calif. Mr. Perkin has replaced Ernest Chapman as chairman of the display committee. There will be no charge for competitive and non-commercial display space, and a large area has been set aside for "swapping", always a feature of especial interest in which all attending are urged to participate. Commercial exhibitors who have

not already done so are asked to immediately contact W. J. Rodekohr at his new address, 25 Elgin Street, Alhambra, Calif.

As previously announced the convention will be sponsored by the Pasadena society and will be held in the Glendale Civic Auditorium from Friday to Sunday, June 14-16, 1946, with the banquet at the Los Angeles Breakfast Club on Saturday evening, June 16. Society secretaries should make early reservations for their members who wish to attend the banquet, as the number is strictly limited. Further information regarding Convention plans may be obtained from Jack Streeter, 6808 St. Estaban Street, Tujunga, Calif., or from the secretary of the M.S.S.C., Miss Betty Holt, at 223 E. Glenarm Street, Pasadena 5, Calif.

Scientific Library Destroyed By Japs to be Rebuilt

The Editor:
Rocks and Minerals
Peekskill, New York
(Through the Office of
Foreign Relations, Manila)
Sir:

At the outbreak of World War II, the Scientific Library of the Bureau of Science, an office under this Department, had one of the largest and best known collections of technical and scientific publications in this part of the Orient. This same library was destroyed by the Japanese during the war.

We shall appreciate it, therefore, if you will kindly help us in the task of building anew from scratch some such collection by donating to the library whatever publications you can spare now and in the future. Please send them addressed to:

Scientific Library
Bureau of Science
Manila, Philippines

January 29, 1946

Very respectfully,
Jose S. Camus,
Under Secretary

Hugh A. Ford Opens Mineral Store

On Saturday, April 6, 1946, at 10:00 a.m., Hugh Alex Ford opened a mineral store at 110 Wall Street, New York City. It was a grand opening and a large number of collectors were in attendance.

Mr. Ford is one of the foremost mineral collectors of the world. He began to collect minerals as a hobby since he was a boy of 12 with an interval of some years. For the past 30 years he has been an active collector and has purchased fine specimens from dealers in the United States, Great Britain, the European Continent, and elsewhere. He is a Fellow of the Mineralogical Society of America, a member of the Mineralogical Society of Great Britain and of the Société Française de Mineralogie, as well as of the Rocks and Minerals Association, the Boston Mineral Club, and the New York Mineralogical Club.

Our best wishes are extended to Mr. Ford and may his store crystallize a mineralogical success!

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THE WHIRLWIND VALLEY *LYMNAEA BONNEVILLENSIS* SITE

By RONALD L. IVES

Vice-President, R. & M. A.

ABSTRACT

Accessible white marl beds containing plentiful fossil gastropods of Pleistocene age, in Whirlwind Valley, Juab and Milard Counties, Utah, are here described.

INTRODUCTION

Although fossil shells of various ages are plentiful in the Bonneville basin, perfect specimens, suitable for definite identification, are somewhat difficult to recover, the majority being either wave-damaged or weathered.

Because of the increasing importance of exact dating of Pleistocene deposits in the solution of a number of physiographic problems in the Basin-and-Range area, a careful search was made along the ancient Bonneville shorelines, in an effort to find a former "quiet water" area, in which undamaged shells might be found "in place".

This search, entailing several thousand miles of desert travel over a period of nearly four years, resulted in the discovery (or rediscovery) of a large number of poor to fairly good fossil beds of probable Pleistocene age, and to the finding of one location, the Whirlwind Valley Site, which is ideal in every respect.

LOCATION AND ACCESSIBILITY

The Whirlwind Valley fossil beds are centered about lat. $39^{\circ} 38' N$; long. $113^{\circ} 16' W$; Alt. 4950' MSL., in the dry wash draining the long valley between the Dugway Mtn. — Thomas Range — Drum Mt. ridge (on the east) and the Fish Springs Mts. — House Range uplift (on the west). Access by road from Salt Lake City, using a conventional vehicle (such

as a civilian passenger car), is possible through Tooele, St. John, Lookout Pass and Simpson Springs to the foot of Dugway Pass, thence south (about 12 miles) along the Keg. Mtn. Road to the vicinity of Topaz Mtn., then west (about 13 miles) to the south end of the Fish Springs Flat; or via Lehi, Provo, Eureka and Tintic to the Nephi-Callao Road, and then west (about 55 miles) across the Sevier Desert to the Fish Springs Flat. Site location and access roads are shown in Fig. 1. The area is about 10 miles southwest of Topaz Mountain and 20 miles SSE of Fish Springs, and 35 miles from the nearest telephone (Callao). Nearest supply points are Tooele and Eureka (¹).

The best fossil locations are on the sides of the dry wash draining northward toward Fish Springs from Whirlwind Valley, and are reached by driving up the floor of the wash from the road crossing, which is in the center of the valley, and easy to locate from a distance.

LOCAL STRATIGRAPHY

The general stratigraphy of this area is complex, and much of it still needs to be worked out, but the local stratigraphy of the fossil bed area is simple, clear, and uncomplicated.

Extending downward from the present surface to a level about 40 feet below the Bonneville shoreline, or about 5210 feet above MSL. is a roughly stratified mass

- (1) In this isolated region, where a minor vehicle failure may have serious consequences, it is customary to give all possible aid and assistance to anyone having vehicle trouble, even at the cost of considerable personal inconvenience.

of gravel, sand, and occasional boulders, derived from adjacent highlands, and deposited in its present location by sheet-floods and cloudbursts. This deposit is still forming.

Below this surface material is a thick bed of brilliant white marl, the upper surface of which has been slightly eroded. This marl, which contains the fossils, is massive in the upper three or four feet, then thinly and regularly stratified, in layers from $1/16$ " to $1/8$ " thick, to the bottom of the exposure, which is not the base of the formation in most places. Thickness of the white marl, in locations where both top and bottom are exposed, exceeds 50 feet. Separating the white marl from the overlying wash and alluvium, in scattered locations, are thin lenses of coarse white sand; and in other locations lenses of coarse gravel. The marl is somewhat bentonitic in most lo-

cations, expanding as much as 10 percent when wet.

A natural stratigraphic section of the fossil locality comprises Fig. 2, a photograph of the wall of the dry wash draining Whirlwind Valley into Fish Springs flats. More than three linear miles of exposures of this type are present in the area, and a large number of similar exposures, of lesser areal extent, can be found in tributary gullies, and in scattered "blowouts" where the overburden has been removed from the marl by wind action.

IDENTITY AND SIGNIFICANCE OF FOSSILS

Two separate collections of specimens (here loosely called fossils, although the shells are substantially unaltered) from this site were sent to the U. S. National Museum, in Washington, where they were studied by Drs. Cooper and Yen,

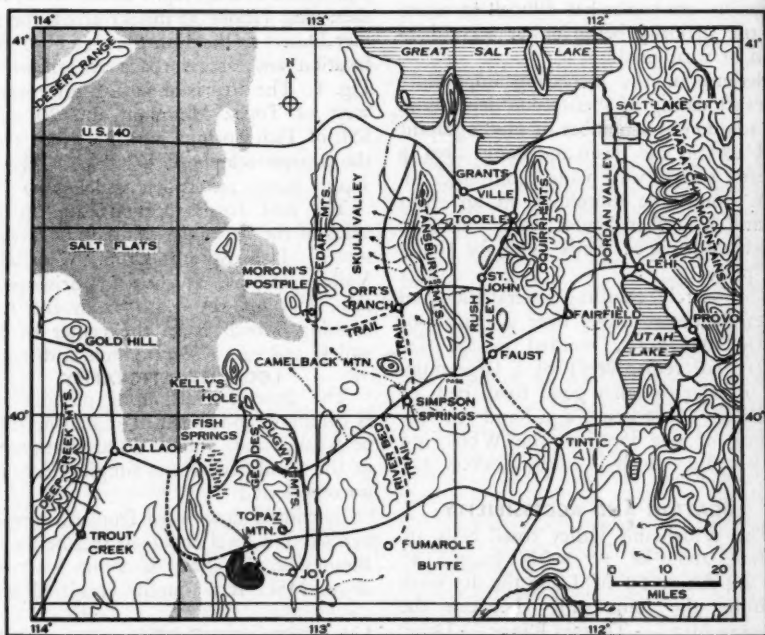


Fig. 1. Outline map of a part of the Salt Lake desert area, showing location of the Whirlwind Valley fossil site (vertical lining, southwest of Topaz Mtn.), and of access roads. Dashed lines are roads and trails passable by jeep, but hazardous for ordinary cars (spring 1946). Lowest contour is about 5,000 feet; contour interval is about 1,000 feet.



Fig. 2 The Whirlwind Valley fossil site, showing arrangement of strata. At the top (dark gray) are deposits of wash and alluvium, eroded from adjacent highlands. Directly below them are the white marl beds, in which the fossils occur. Note the massive upper section of the marl beds, and the stratification of the lower parts. Jeep in foreground gives approximate scale.

of the Department of Invertebrate Paleontology. They report the presence in both collections of *Lymnaea (Galba) bonnevillensis* (Call) and *Amnicola longinqua* (Gould). Dr. Yen states that "*A. longinqua* has been reported from different parts of this country from upper Pliocene to recent times, but that *L. bonnevillensis* is believed to have been reported only from Pleistocene beds. Therefore, assignment of this deposit to the Pleistocene is probably correct".

One of the two collections, with identifying data, remains at the National Museum, for future reference and study.

CONCORDANCE OF EVIDENCE

The report from the National Museum confirmed the dating of the white marl beds obtained on other bases, and showed that the Whirlwind Valley site could be used as an "index location" for comparative studies of Pleistocene stratigraphy in west-central Utah.

Stratigraphic location of the white marl beds below the surface alluvium, below the Bonneville shoreline (about 5250' MSL.), and above the top of the Escalante deposits (about 5160' MSL.), and their undistorted and unaltered nature strongly suggested deposition during the Bonneville lake stage (later Pleistocene).

Nature of the deposits — bentonitic marl, evenly stratified in the lower portion, containing unaltered snail shells in good to perfect condition, indistinguishable in the field from modern snail shells — indicated "quiet water" deposition of no great geologic antiquity.

Local land conformations, and absence of a deeply-incised Bonneville sea cliff confirmed the "quite water" conclusion obtained from the type and condition of the deposits.

Rough classification of the diatoms contained in the marl disclosed no forms of any great antiquity, and no forms not compatible with a Pleistocene fresh-water environment ⁽²⁾.

(2) A large sample of white marl has been sent to Dr. Ruth Patrick, of the Philadelphia Academy of Natural Sciences, for expert analysis. Dr. Patrick will report on her findings when her study is completed.

Fossil shells (described above) confirm the Pleistocene dating arrived at on other bases, and are of types elsewhere identified with the Bonneville lake stage.

Comparison of the white marl beds in Whirlwind Valley with those in Gilbert's "Old River Bed" ⁽³⁾ section (Fig. 1, "River Bed Trail") shows complete agreement in all respects but the fineness of the marl texture and the state of preservation of the included gastropod (snail) shells. The River Bed site has coarser marl, and poorer shells than the Whirlwind Valley site, apparently due to rougher water during deposition at the River Bed, a conclusion supported by deep incision of the Bonneville sea cliff near the River Bed, and comparatively shallow incision of the same feature at Whirlwind Valley.

USE OF FINDINGS

Heretofore, investigators of later Pleistocene stratigraphy in large parts of the Utah Desert area have used Gilbert's "Old River Bed" section as a reference point. As a result of the investigations outlined above, the Whirlwind Valley marl beds, 45 miles to the southwest, having been correlated with the white marls of the River Bed site "beyond any reasonable doubt", can be used as an additional check and reference section, in some respects superior to the original site, and of particular value at present because of the indefinite closure to entry of parts of the River Bed area for reasons of safety and military security.

Plentitude of gastropods at the Whirlwind Valley site is such that any careful collector can secure an ample and representative collection in a few hours, without fear of exhausting the area, there being at least 1/10 of a cubic mile of marl in the deposit, with vertical exposures of more than one million square feet, and a probable minimum of five shells to the cubic foot (some cubic feet contain over 200 perfect shells).

From continuing studies of Pleistocene stratigraphy in the Basin and Range area come more accurate datings of the coming of man to North America; more in-

(3) Gilbert, G. K. *Lake Bonneville*, U. S. Geol. Survey Mon. 1, Washington, 1890.

formation regarding the sudden and apparently recent extinction of the giant Pleistocene mammals; and more accurate regional correlations of geologically recent climatic changes (*).

ACKNOWLEDGEMENTS

The writer is indebted to Drs. Cooper and Yen, of the U. S. National Museum, for the fossil identifications detailed above; to Mr. Jesus J. M. Gonsalvez, a Basque shepherd, for shelter and hospitality; to the personnel of the McIntyre Ranch, Juab County, for hospitality and assistance in the field; and to the Night Marshal of Eureka, Utah, for courtesies extended.

- (4) Early studies in this field were done by I. C. Russell and G. K. Gilbert. Present status (1945) of this group of investigations is ably summarized in Antevy, E. *Correlation of Wisconsin Glacial Maxima*, Amer. Jour. Sci. Vol. 243-A, 1945, 1-39. An interesting recent study in this general field is by Miller, R. R. *Correlation Between Fish Distribution and Pleistocene Hydrography in Eastern California and Southwestern Nevada, with a Map of the Pleistocene Waters*, Jour. Geol. Vol. 54, 1946, 43-54.

Premier Diamond Mine One of World's Largest Man-Made Holes

The Premier diamond mine, discovered in 1903 and located 20 miles north-east of the city of Pretoria, Transvaal, South Africa, is one of the largest man-made holes in the world. It is a huge pit, 2900 by 1400 feet across and over 700 feet deep. The waste dumps from this mine look like mountains when viewed from a distance.

The largest diamond ever found in the Premier mine is the famous "Cullinan", one of the world's largest diamonds. It was found on January 25, 1905, less than two years after the mine itself was discovered. The weight of this famous stone was 3,106 carats (1.36 lbs.)

Dufrenite in New Jersey

Dufrenite is a hydrous phosphate of iron and greenish in color. It has been found at several localities in New Jersey, all in Monmouth County and all in greensand. Its most noted occurrence is

Allentown (in the southwestern part of the County) where it is found in leek-green coatings and masses, sometimes the color is brownish due to its alteration to limonite. Another occurrence is Middletown, in the northern part of the county, and especially on Telegraph Hill, 2½ miles N.W. of Middletown, where nice specimens were found during the sinking of a well. Dark green compact fibrous masses were found west of Freehold, in the central part of the County.

Monmouth County is in the eastern part of New Jersey.

SANDSTONE OCCURRENCE NEAR MEADVILLE, PENN.

By CHARLES DARRINGTON

Meadville, Penn.

I have found 160 acres of sandstone with dome 800 feet high, a short distance north of Meadville, Penn. With modern methods of working, I believe this sandstone could be cut into blocks for houses, etc., and there is plenty of it here to build a big city. A glass factory would also pay. The sandstone makes fine material for cement and plaster use. It should be worked.

Meadville (in the central part of Crawford County) is in the northwestern part of the state.

ODD CRYSTALS FOUND IN PERKIOMEN MINE HEMATITE

By C. A. THOMAS

Hematite geodes and cavities found at the old Perkiomen Copper Mine occasionally contain a single microscopic doubly-terminated crystal of yellowish-green color. These crystals are very soft, at least as soft as steatite or talc. They may possibly be green gypsum, being quite soft when wet. The writer at first thought that these individuals were insect eggs. Hundreds of lumps of hard iron composition were fractured in an effort to find larger crystals or even a few more but none were found.

The Perkiomen Copper Mine is ½ mile northwest of Audubon in southern Montgomery County in southeastern Pennsylvania.

AMETHYSTS OF THE BULLFROG MINE AND DEATH VALLEY ONYX

By T. ORCHARD LISLE

During the early days of World War II I was intrigued with a story by Jack Hilton in "The Desert Magazine" of how he found lovely amethyst crystals in some weathered boulders on the hillside adjacent to the Bullfrog mine in the Bullfrog Hills, near Rhyolite in Southern Nevada. His interesting account of the crystal groups and the accompanying photographs tempted me to make a trip there from San Francisco.

A few weeks before gasoline was rationed I started out accompanied by the Rev. Alfred T. Case of San Mateo, California, who was a fellow member of the Northern California Mineral Society. Our vehicle was an English car somewhat larger than the Bantam and very economical on gas. It would go over 2,000 miles on the amount of fuel the average automobile burned in a thousand miles.

We drove down the valley to Bakersfield, thence over the Tehachapi pass; across the Mohave desert on Route 466 to Barstow; on Route 127 to Death Valley Junction and thence to Beatty, Nevada. It was a long haul of about 640 miles. On routes 29 and 5 between Death Valley Junction and Beatty we passed the vast sand dunes which rise above the sea level as high as 2,715 ft. These dunes form land marks for miles, and are small mountains in themselves. Although Death Valley is below sea level, the near-by mountains rise to over 10,000 ft.; while just over one hundred miles away Mount Whitney, the highest spot in the United States, rears its lofty snow-clad peak to 14,496 ft. In fact, Wahguyhe Peak which is within a few miles northwest of the Bullfrog mine, is 8,590 ft. high. There's plenty of wild, desolate and tough country in the neighborhood for any rockhound who wants to get close to nature and commune alone with his Maker.

The Bullfrog Mine

Bullfrog is a gold mine, but as all straight gold mining had then ceased by order of the Government, the tunnels were being worked for copper ore, although at the time of our visit there was a temporary shut-down due to the labor situation.

The mine is located about six miles southwest from the Ghost Town of Rhyolite and approximately ten miles southwest from Beatty, Nevada, and is reached by a dirt (sand and rock) trail through the desert scrub which leads to the right from Route 58. The going is hard on your tires, but is passable in good weather.

"Shorty" Harris, for whom a marker has been erected over his grave in Death Valley, is said to have discovered the

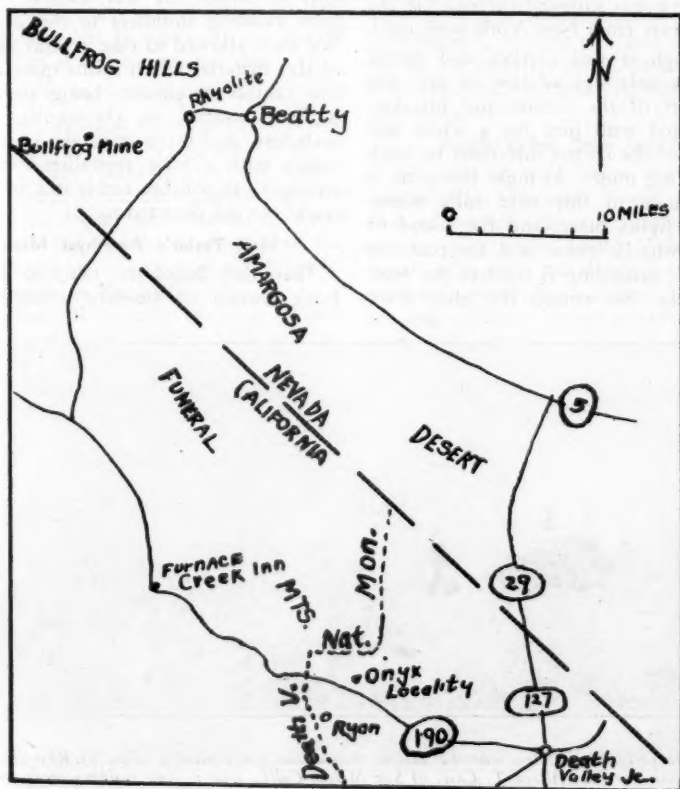


The author poses for his picture while sitting on a large block of blue calcite at the famous Crestmore quarry near Riverside, Calif. At the time of his first visit to this noted locality there were dozens of these large blocks of blue calcite lying around in one part of the quarry. The section was later reworked by the operators and on subsequent visits Mr. Lisle found it difficult to find even a small piece of blue calcite. Some of the calcite was full of small green garnet crystals.

Bullfrog mine sometime before the great gold strike at Rhyolite. The story goes that "Shorty" was chasing a burro, but the animal kept out of reach and finally ran around some greenish rocks. Out of breath and hot, "Shorty" sat on a boulder to get his wind and cool off. He happened to knock a piece of rock off the boulder and a gleam of yellow caught his eye. He staked the claim which became known as Bullfrog, and later sold it for \$6,000. The mine eventually yielded millions in gold. At the time of the writer's visit in 1942 it was, as stated, being worked for copper, and was the only operating mine for miles around. The geology of the surrounding hills seems to be the same, so there is a possibility that modern geophysical prospect-

ing would reveal many veins as yet undiscovered; but gold mining is a great gamble. Only a comparative short distance away are the workings at Virginia City, the original strike of the great Comstock lode, where many fortunes were made, and some lost. A big gold strike also was made at nearby Tonopah.

Prior to starting from San Francisco I had written to Roy Taylor, superintendent of the mine, for permission to do some mineral hunting, and which consent had been graciously given. Upon arrival we were made very welcome by Roy and his charming wife, Rosie, and both insisted that we stay to lunch. What a delicious meal she prepared — and so far out in the desert away from sources of food supply!



Sketch map showing location of the Bullfrog Mine, Rhyolite, and the Onyx locality.

Rhyolite, Nevada

We had spent the night in the small and unpretentious hotel, at Beatty, and in the morning had spent the earlier hours wandering around the ruins of Rhyolite. The old gold workings in the adjoining hills are numerous; but there's extremely little chance of the most persistent rock-hound finding any specimens of gold in quartz, so we did not attempt to search. There is one building at Rhyolite still in excellent condition, and is now known as the Rhyolite Ghost Casino. It is still inhabited, and formerly was the terminus of the defunct Tonopah and Tidewater Railroad. When we passed by, the rails and wood ties were being torn up and transported to Oakland, Calif., to form means of transportation for workers at Henry Kaiser's shipyards at Richmond. For this shipyard railroad the old elevated cars from New York were used.

Although it was daytime and before noon, the only sign of life we saw was the owner of the Casino and his dog. We chatted with him for a while and he gave us the correct directions to reach the Bullfrog mine. At night the scene is very strange in this wild hilly waste. Brilliant lights blaze, and the sound of roulette wheels, music and laughter can be heard. Gambling is legal in the State of Nevada. No wonder this ghost town

casino formed the subject of a coast-to-coast broadcast in the Death Valley Days radio program some years ago.

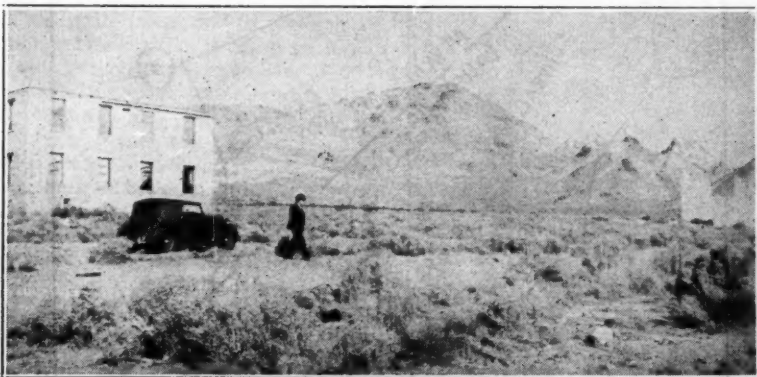
Mineral Collecting at the Bullfrog Mine

Despite our protests Mr. and Mrs. Taylor generously devoted the rest of the day to entertaining us. No one could have shown finer hospitality. They told us, however, that we probably would be somewhat disappointed in the amethyst crystals that we might find, as they are pale in color and opaque or cloudy; that the best specimens no doubt are buried under the old mine dumps. The quality of the crystals was confirmed when Mrs. Taylor showed us her collection.

After we had searched the mine dump without success, Mr. Taylor took us to the mine entrance where several hundred tons of copper ore was stacked in neat piles awaiting shipment to the smelters. We were allowed to take several samples of this material which forms quite attractive cabinet specimens, being composed of blue azurite, or chrysocolla, green malachite, and other minerals in a white matrix with a little crystallized massive amethyst. It polishes nicely if a few hair cracks are not objected to.

Mrs. Taylor's Amethyst Mine

Then they broke the news to us that Rosie owned an amethyst mine, which



In the early days of the war the author visited the ghost mining town of Rhyolite, Nev., together with the Rev. Alfred T. Case, of San Mateo, Calif., who is seen walking away from the car. Note how wild and desolate are the surroundings, yet a gambling casino flourishes in this desert wilderness.

she had discovered and worked in her spare time. This was something that Jack Hilton had not included in his article. They drove us to the location in their light truck, as Mr. Taylor said the trail would be rough on our little car. The mine had been excavated about 10 ft. into the hillside, and as soon as our eyes became accustomed to the subdued light after the brilliancy of the desert atmosphere, we could see a dozen or more amethyst veins in the cutting. We dug out a number of pieces—it is on the massive order, and semi-milky, and also found several milky-crystals of about half-inch diameter; but nothing spectacular. Walking back to the truck we noticed some boulders on the hillside above us, and recognized them as the ones Mr. Hilton had photographed; but we did not climb up to examine them for Mr. Taylor said that he knew of no crystals there; also it was a very hot day.

In Death Valley, Calif.

We bid Mr. and Mrs. Taylor au revoir and drove to the Amargosa Hotel at Death Valley Junction for the night, where some of the mining guests gave a Mineralite display of fluorescing tungsten ore. They had been prospecting for strategic ore, and their find was lying in large hunks on the lobby floor.

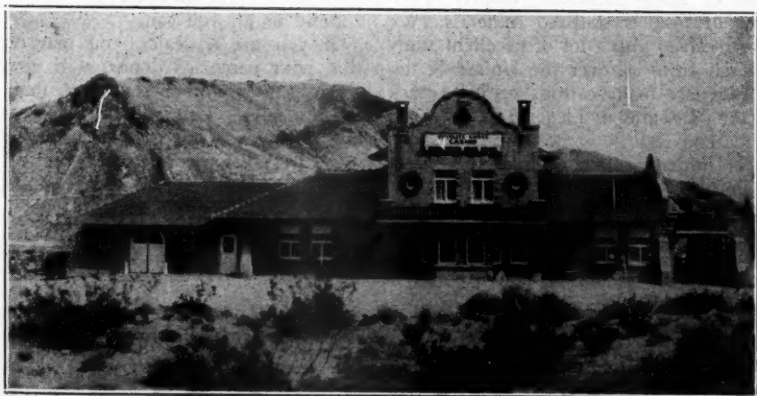
At breakfast the next morning I asked the waitress to put three teaballs into the

pot as I liked my tea strong. She informed me that one would be enough because the presence of soda salts in the local water (there is a mine several hundred yards away) made the tea very strong. Then she confided a secret; — if, she said, you want to bring out the flavor and strength of tea when you get home, just put a pinch of baking soda in the water and it will have the same effect as Death Valley Junction water. Later I told my wife, and to this day she always drops a pinch of bicarbonate of soda into the tea water. And so one learns as he lives!

After breakfast we drove to the official entrance of Death Valley where, during the war, posters warned visitors against entering because it no longer was patrolled (in normal times every road in the Valley is patrolled twice a day). Nor were there any wardens stationed at the gate house to register cars and occupants, and so you travel at your own risk in this National Park, which can be very hot, dry and dangerous.

Death Valley Onyx Locality

We retraced our "steps" for about a quarter-mile and soon found the long vein of banded travertine, better known among collectors as Death Valley Onyx, about 200 yards off the highway. The pattern of every piece differs, and when cut and polished makes attractive bookends, and ashtrays. Some of it greatly



The Ghost Casino, formerly the old railroad station, is the only building left standing and inhabited in the old mining town of Rhyolite, Nev. It is located in the heart of the desert.

resembles bacon, so if you also have some yellow and white rocks you can make yourself a dish of eggs and bacon, which a friend of mine actually has done. We gathered about 75 to 100 lbs. of variated material, and left several thousand tons behind for other rockhounds.

The Return to San Francisco

We thought we would drive through the Valley as the weather was not hot that day (like it was at Rhyolite), go to Lone Pine and take some close-up photographs of Mt. Whitney, and then visit some rock locations on route 395 en route to the town of Mohave. There is a petrified forest in the El Paso mountains between Freeman Junction and Ricardo, and a short distance from there are the well-known mines at Randsburg. However, just as we started towards the Death Valley entrance the rain came down in torrents, so we decided that it would be very unwise to proceed further, and turn-

ed round and drove back to Barstow. Although it was still raining heavily we switched over to Route 66 and drove a dozen miles towards Needles and visited a mineral dealer who specializes in banded jaspers. We bought some specimens. Another 20 miles ahead there is an extensive jasper and agate deposit on the desert floor quite close to the highway; but as there seemed to be no chance of let-up of the cloud burst we did not go there and turned for San Francisco. It did not stop raining until we reached Bakersfield.

There is a very sad ending to this story—a finish which is difficult to write. Mrs. Lisle and I have contacted the Taylors through the mail each Christmas since my visit. This year Mrs. Taylor wrote saying that her husband had perished in a gasoline fire last July. Thus has another fine man passed to the great unknown at an early age.

YOU CAN HELP!

Mineralogical museums in Europe were destroyed or badly damaged during the war. A committee headed by Dr. Palache has solicited gifts to help in teaching mineralogy. We have had donations of many handsome display specimens of fine, crystallized minerals. We have received also a lot of excellent study material from all over the United States.

There are many cartons ready to pack for the Museums in Liege, Brussels, Kiev and Caen.

The mineral collection in Prague, Czechoslovakia, has been sadly damaged. Practically all their good American material is gone.

We again ask American collectors to

donate lots of fine specimens. They will be sent to any of these museums in Europe that you designate. If you donate duplicates the Committee will distribute them wisely.

HURRY UP

Send us all you can.

If you are a dealer, you may realize that your name, as donor, will go with the specimen and a statement that you are a dealer. That advertising is worth money to you. Give us some good things.

Address shipments to:

Charles R. Toothaker, Curator
The Commercial Museum
34th Street below Spruce
Philadelphia 4, Pennsylvania

Buy Bonds and Stamps

DYER QUARRY ZEOLITES (Part II)

By C. A. THOMAS

706 Church Street, Royersford, Penn.

The second in a string of large trap-rock quarries (Triassic intrusive diabase sills) which the writer visited in the late summer and fall of 1945 were really two, one on each side of Hay Creek about $1\frac{1}{2}$ miles south of Birdsboro on route 82, leaving route 83 (left turn) if entering Birdsboro from the east or straight through the steel town if coming in on route 82 from the north.

These Berks County, Pa., Quarries are large and one cannot understand why they were abandoned. The Quarry on the right, entered just to the right after crossing the trout stream, Hay Creek, lies behind the large wooden bins and old concrete work. The car can be driven into each quarry. The quarry on the left is entered just before crossing the bridge over Hay Creek and to the left, up over a railroad and a bumpy dirt road. These two localities are similar but the better specimens were obtained in the latter. Intrusive Triassic diabase sill spells Zeolites. Although these quarries were considered to have been gleaned bare long ago, the writer worked on some wall fissures and brought new and beautiful specimens to light, literally, to the Mineralight and the hot lamp.

Beautiful perfectly formed rhombs of scattered calcites on weathered laumontite in varying hues of scintillating brown, honey, white, tan, mahogany, were possibly the best specimens of calcites the writer has ever found. Practically every specimen is fluorescent and phosphorescent to a very satisfactory degree but not to be compared with the elite of minerals the Franklin, N. J. material. Some of the calcite, fully formed crystals, are $1'' \times \frac{1}{2}'' \times 1''$ doubly terminated and shaped like the playing card diamond, only three dimensional of course. Most of these are rather insecurely attached to very much weathered pure white laumontite. The laumontite, however, is still in good crystal form, some of which adhere to the dark brown calcites in microscopic

double-ended prisms, or like tiny white individual needles.

Much of the laumontite is phosphorescent along with the calcites. All or nearly all of the variously shaped and colored calcites are good under both cold-quartz and the longer wave U.V. lamps. The most notable are the calcites of microscopic size — dust size — which tip the crystal terminations of prehnite, stilbite and scolecite. Some of the calcites thus situated are brilliantly reacting and remind one of the milky-way with a lot of brighter stars thrown in for good measure.

The writer had long thought that the scolecite was a form of anthophyllite in a white form. Some of this material is suspiciously like aragonite in its behavior under the open cold-quartz, namely its phosphorescence. Beautifully formed but tiny apophyllites are not too rare. These may be quickly found by the Mineralight. They react a pinkish color in an otherwise sea of tan and gold.

Perhaps the greatest specimen for beauty from this quarry is the type with beautiful thin water-clear or pearly fan-shaped stilbites sticking out from a bed of microscopic to macroscopic size calcites. These stilbites stand out every which way and are in some cases as wide as the rounded end of a nail-file, which taper toward the matrix to a perfect point.

Some stilbites are covered sparsely with tiny calcites. A micro-mount enthusiast finds plenty on one large specimen to keep him quite busy. Although the smaller micro stilbites are perhaps clearer they are no more perfectly formed than the larger ones which sometimes ran to one inch in length. Beautiful rosette clusters of these stilbites in separate groups make lovely specimens especially in tests phosphorescent, the clusters black out in an attractive pattern as the background of luminous calcite flares up and dies down in after-glow.

Prehnite in not pretty cementing ma-

terial is all over the locality. Some however are covered here and there with nice micro-laumontite or a smear of highly phosphorescent calcium material. Some of this brilliantly phosphorescent calcium is to be found in powdery masses and tiny isolated spots on prehnite. The after-glow is exceptional. Of course the better prehnite has been taken out long ago, but still on the quarry wall can be seen some loose hanging slabs of trap that may reveal some nice prehnite if it ever falls.

In all cases the writer's best specimen material was painstakingly dug from rocky fissures and at some risk. One notable specimen is a highly metamorphic hydrothermal chunk of diabase containing thousands of tiny fluorescent, phosphorescent thermoluminescent calcites in thick vein or filled cavity — it weighs about eight pounds or better.

Thomsonite has been found here but not knowingly by the writer, unless rounded spheres of "aragonite" prove to be Thomsonite. They phosphoresce.



Minerals for Destroyed Museums

The Continental Committee wishes to urge all Local Committees and every mineralogist to contribute minerals at the earliest possible date. Shipments are now being prepared for the following museums: (1) Liege, Belgium; (2) Kiev, Ukraine; (3) Caen, France; and (4) Brussels, Belgium. They should be ready by the end of May 1946. Please indicate for which museum each package is intended. Ship in separate containers gifts for different institutions. For detailed instructions, please refer to the original appeal (ROCKS AND MINERALS, 20, 320-321, July 1945).

Charles Palache, Chairman.
J. D. H. Donnay, Secretary.

Editor's Note: American collectors should send their donations of mineral specimens to Charles R. Toothaker, Curator, The Commercial Museum, 34th Street below Spruce, Philadelphia 4, Penn.

Special Display of Staurolite Crystals in Museum

The American Museum of Natural History, New York, N. Y., has placed on display a series of staurolite crystals, both simple and twinned, collected by Fred O. Scroggs of Brasstown, N. C.

The purpose of the display is twofold. First, the Museum is pleased to show some of the collecting possibilities awaiting mineral hunters who will take advantage of easing travel conditions to visit Southeastern mineral localities in the coming months. Secondly, there is a widespread impression that this type of material is to be found only in Virginia, and it is anticipated that the loan display will serve to correct this impression.

All of the specimens displayed were collected by Mr. Scroggs and represent localities in Tennessee, North Carolina, and Georgia. Most interesting are the sharp fresh crystals from Fannin County, Georgia, but the interest in these is closely rivalled by that elicited by the large, largely altered single crystal from Copper Hill, Tennessee.

The display will be on for two months and other loan displays of this type will follow, it is hoped, as collectors gain opportunities to widen their activities.



Fluorite in South Africa

Fluorite is quite common in South Africa and many fine specimens have been found. In the fluorite deposits, near Ottoshoop in western Transvaal, and especially on Malmani Oog, the mineral occurs in a compact form and in a number of colors as amber, blue, green, and purple; these can take a beautiful polish and are suitable for ornaments, etc. Gem quality fluorite, of a pale mauve and green color, is found in the fluorspar deposits near Hlabisa, Zululand.

Optical fluorite, colorless and pale bluish, has also been found in the Malmani Oog fluorspar deposits.

In the Kranzberg tin mines, north of Erango Mts., District of Omaruru, nice specimens of purple crystallized fluorite occurs.

At Pforte, S.W. Africa, interesting "black" crystals of fluorite are found.

NEW PITCHBLEND E DEPOSITS FOUND IN CANADA

Canada's Eldorado mine, which figured in recent reports of "black market" dealing in uranium — a basic material in atomic work — was the scene of one of the most frantic mineral hunts in history, the March 2, 1946, issue of *The Saturday Evening Post* points out.

There is evidence that the wartime prospectors turned up some of the world's largest deposits of pitchblende, mother mineral of uranium and radium, Post Author Leslie Roberts writes in his article, "Canada Found the Pitchblende." The prospectors worked in teams, carrying strange gadget-like Geiger-Mueller machines which enabled them to "listen" for ground radioactivity. The actual data on the discovery and production of pitchblende remains a secret, however.

"All we had in the beginning was the then privately owned Eldorado mine at Great Bear Lake, shut down and filled with water," the Honorable C. D. Howe, who directed the search for the Canadian government, is quoted as saying. "... and before we could even get the score from the old mine, the scientists were saying they believed they could make atomic fission work within the year."

The Eldorado mine was expropriated and all future discoveries of pitchblende were declared the property of the Canadian government, the article continues.

Howe's experts took the riddle to Dr. C. J. Mackenzie, president of Canada's National Research Council and co-chairman of the newly formed Anglo-Canadian atomic team in the spring of 1944.

"Mackenzie's scientists evolved the answer, and the research council began to manufacture portable Geiger sets weighing approximately twenty pounds," the article relates.

Meanwhile Howe's aides had been busy in other directions. From Kenya they rushed Emil Walli, expert pitchblender with previous Eldorado experience, back to Canada. Next they yanked a brilliant young engineer, Dick Murphy, out of the Canadian army to organize and handle the Geiger parties.

In a series of test runs to rehearse the

crews in the use of the Geiger apparatus, a new ore body was discovered within a mile of the old Eldorado mine. This new discovery, coupled with intensive development of the prewar workings, made the atomic project independent of the Belgian Congo, should that supply be cut off by enemy action.

The search began in earnest in June, 1944, continues the article. Twenty teams were flown to carefully chosen points in every corner of the wilderness empire. The hunt was conducted under a cloak of secrecy. The Geiger teams knew only that they were looking for pitchblende. Mention of Great Bear Lake was barred, and airplane operators flying into the Territories were instructed to book no passengers to Eldorado.

"The twenty teams examined sites running into triple figures, many of them in country which seldom, if ever, had felt the impress of white man's boots."

"The Geigers have certainly justified our faith in them," was the comment of Emil Walli—which, says the article, is just about the limit of specific information the law will allow.

"Optimists claim that what is in sight already is the greatest treasure-trove of radioactive minerals man is ever likely to discover," the article concludes. "Whatever the ultimate answer may be, credit will belong to the pint-size edition of the superhuman Geiger, which eavesdrops on Mother Nature, and tells."

Allanite First Found in Greenland

Allanite, a silicate chiefly of aluminum, cerium, iron, and calcium, is a black mineral which was first found at Alluk, in southern Greenland, about 140 years ago, by Sir Charles Giesicke but first shown to be a distinct species by T. Allan, of Edinburgh, Scotland, hence its name. It occurred with zircon and quartz in granite.

The mineral is very common in the granite regions of New York and New England; its occurrence in southeastern New York has been known for over 100 years.

COLLECTING MINERALS IN THE MIDDLE EAST

By RICHARD V. GAINES

The Middle East has few notable mines or mineral deposits. Nevertheless, as I was stationed there for 21 months in 1942 and 1943, both in Eritrea and in Egypt, I visited as many localities and did as much collecting as circumstances permitted. In the course of this time I made the acquaintance of several well-known and active mining engineers resident in both countries; visited all accessible localities in Eritrea and two in Abyssinia; and, wherever possible obtained such specimens as I could by the less strenuous but still not easy, "silver pick" method.

My task was complicated by the fact that in no place I visited, was I able to find a single bona-fide mineral collector. Therefore, information on existing localities was almost non-existent. About the only tips I got were from some of the engineers whose acquaintance I made; almost all mining engineers will save a few ore specimens or a spectacular crystal if they run across one.

The Italian economic development of their East African empire included a thorough search for valuable deposits of any kind, conducted by capable engineers and with plenty of government money behind their efforts. As the expected Abyssinian bonanza was much smaller than anticipated, yet pressure from Rome to make a showing of some kind was very strong, many low-grade and uneconomical deposits were developed. By 1940, which was the high point of the Italian empire, they had two fairly good gold mines, a large salt industry (from evaporating seawater) and a cement plant, to show in Eritrea, besides several gold, copper, iron, coal, and other mines which died a quick death as soon as the money which had been poured into them like water through a sieve, was cut off. In Abyssinia the prospects were better, but few of the mines discovered had reach production by the time the Italians were driven out.

Collecting in Eritrea

The first mine I visited was Sciumagallé, a lode gold mine about 13 kilometers by dirt road north of Asmara, Eritrea. The gold occurred in quartz with

pyrite, chalcopyrite, bornite, and traces of sphalerite. At best, the deposit had averaged only 6 grams per ton in the oxidized zone, not enough to pay the cost of mining. Below the 200' level in the zone of primary sulfides, the values were much lower. Yet they had a beautiful modern mill and cyanidation plant, and first rate mining equipment. I went over the extensive dumps several times, but found no vugs or crystals; only the aforementioned minerals plus an occasional speck of free gold. Later on I visited six other, smaller gold mines within 100 kilometers of Asmara; they were all low grade and none had penetrated below the zone of oxidation. The only specimens I found worth keeping were some small quartz crystals, and these were not very good.

In June, 1942, I went on a trip of about 280 kilometers to the gold mine of Ugara, in Western Eritrea just north of the Abyssinian border. The U. S. Army was removing generators and other equipment from there. This had been a large mine and a profitable one. It is reached by road from Asmara through Cheren, Agordat, and Barentu. The last 35 miles south of Barentu are little more than a cowtrack. The Gasc, a large river, has to be crossed, and as the fine steel bridge over this river had been blown by the retreating Iti's, the mine can be reached now only during the dry season when the river bed is dry. But in a jeep, as usual, the route presented few difficulties. I looked carefully over the dumps but could find no worthwhile specimens; the mine was in a quartz vein similar to the others I had seen. Later I was given a beautiful specimen of quartz with much free gold from this mine.

Collecting in Abyssinia (Ethiopia)

In December, 1942, I was called upon to examine for the Army a "bauxite" prospect in Abyssinia about 100 kilometers West of Assab, Eritrea. It was during a time of severe aluminum shortage at home and the Army had conceived the idea of mining the bauxite and sending it to the United States as ballast in

freighters otherwise returning empty from the war zone. An Italian promoter was mixed up in the scheme and he painted the deposit in glowing terms. Accordingly another engineer and I went to Assab by plane, and after considerable difficulty located a man who could direct us to the deposit. It was not far from a fine highway which the Italians had built into Abyssinia at this point. We went by truck, through the most desolate, hot, dry, boulder-strewn volcanic country I ever hope to see. The deposit turned out to be in the cinder cone of a small, very recently extinct volcano, an unlikely locality for bauxite. To reach it we had to climb across a rough lava flow full of crevices and sharp, jagged rocks, like an enormously magnified cinder pile. The lava showed no sign of weathering since cooling, but as it never rains in that part of the country, its age was difficult to determine. The deposit itself was in this lava and ash, a whitish bitter-tasting powder with here and there small crystals and dendritic formations of it. There was also a smell of sulfur in the air and much crystallized native sulfur coating some of the rocks. The largest crystals were about $\frac{1}{4}$ inch. The white material was later analyzed and proved to be a mixture of the hydrous aluminum sulfate alunogen, and epsom salts. Of course there was not a trace of bauxite.

Early in 1943, I heard about an occurrence of agate near the highway between Adowa and Axum in northern Abyssinia. Accordingly, one Sunday morning early I took three friends in my little Fiat and set out for there. The highway was fine, macadam all the way, and as is customary in Eritrea there was a numbered kilometer-post of granite at every kilometer along the way, with numbers starting at 0 at Asmara, our starting point. The drive is an interesting one, the country getting more beautiful and very fertile as you get into Abyssinia. I located the deposit without difficulty, as the agates may be found over a fairly large area, but mostly between kilometer posts #168 and #169 along the left side of the road. The country rock here was a dark, fine grained igneous

rock with large, twinned, clear yellowish phenocrysts of anorthite or one of the other plagioclase feldspars. Here and there in this rock are nodules of agate, and these can be found in many of the road cuts. The easiest collecting is in the fields, where the nodules have been weathered out of the rock and lie scattered about. This locality is untouched, and, although I tried to be choosy, I nevertheless found myself weighted down with about 50 pounds of agate after about a half-hour's search. My companions did equally well, and my car was presented with a load it could hardly stand, as the four of us pretty well filled it. Later on we continued on to Axum, where we visited a church which bears the same relation to the Coptic Christian religion as St. Peter's in Rome bears to Christianity. The town was very old, very dirty, and very interesting; full of beggars and holy men, and ancient buildings and monuments. We were even shown the crowns of the former kings of Abyssinia, which had been kept hidden from the Italians all during their presence in Abyssinia. There were four, of heavy gold encrusted with stones of many colors whose genuineness I seriously doubted. Nevertheless, the dusky monk who showed us these treasures, carried a pistol under his robes.

Because of the difficulty of carrying around bulky specimens when one is in the army, I was unable to keep all my agate. Eventually I cut what I had found down to one specimen, which I sent home. It was a limonite concretion with fine stalactitic chalcedony inside. Later on, I knocked a corner off this specimen, and dissolved the limonite coating this fragment in hydrochloric acid. The interior thus exposed turned out to be pure translucent chalcedony of a rich amethystine color, very beautiful. Most of the agate we found at this locality was banded, white and grey. Some of the nodules were 6" in diameter, and although some were solid, most were lined with quartz crystals in the very center. Some of the agates tended to cleave along the planes of banding.

More Localities Visited in Eritrea
During the remainder of my stay in

Eritrea, I visited a copper prospect and an iron mine, and for three months was in charge of the cement plant, with its mines of coral rock, limestone, and clay. But none of these places produced any specimens. I also acquired some nice specimens of magnesite, crystals of uvarovite garnet, and crystalline native copper with crystals of cuprite and malachite coating it. But the locality for all these specimens was in the inaccessible northwestern portion of Eritrea called the 'Basso Barca' and I was never able to see these interesting localities first hand.

Egypt and St. John's Island

In Egypt, the country is sandy desert except for a fertile strip along the Nile and the mountains in the southeast. I was stationed at Cairo the whole time, except for three weeks spent in Libya, and thus did not get to do any first hand collecting. The country produces considerable talc and barite, and some chromite. Almost the whole time I was there, and also while I was in Eritrea, I was trying to arrange a trip to St. John's Island in the Red sea, which is off the southeast corner of Egypt and is the best locality for peridot crystals known.

But the most leave I could get at one time would have been two weeks, and then only by a special dispensation from the C. O. The island is uninhabited and inaccessible, and would have to be reached by native (sailing) dhow from Qseir, a port on the Egyptian coast about 200 miles north of it. My most optimistic estimate of the time necessary to get there and back, with favorable winds both ways, was 18 days, with every possibility that I might be stuck there for a month or more. So I had to give up the idea of going there in person, and instead made the acquaintance of the Egyptian mining engineer in Cairo who had been in charge of the mines when they were operating.

He was a charming and helpful old gentleman, and told me all I wished to know. He also showed me many fine gems which had been mined there, including one flawless stone of 148 carats. He had, also, a few hundred carats of small rough crystals which were perfect,

sharp, and clear; I purchased the entire lot from him. I tried hard to get him to part with the only matrix specimen he had, which was the best one he said he had ever found there; it was a fine clear 1" crystal on a piece of serpentine matrix about 2" x 3". But he didn't care to part with it.

Later on, after considerable searching in the bazaars of Cairo, I finally found another little hoard of rough crystals. This amounted to several pounds of material, but it was all water-worn as the crystals had been derived from alluvial operations on the island. I selected about 1,000 carats of the best crystals from the lot, and bought them. There must have been nearly 100 crystals in all, varying from 2 carats to 40 carats.

The island itself is described in a report entitled *Preliminary Geological Report on Saint John's Island (Red Sea)*, by F. W. Moon, B. E., A. M. I. C. E., M. I. P. T., F. G. S., published in 1923 by the Geological Survey of Egypt. From my engineer friend I obtained additional information. All early operations were alluvial, and these went back to prehistoric times, as crystals of peridot from this island have been found in the regalia of ancient Egyptian tombs. In the 1920's and '30's, the source of the peridots in the talus on the side of the mountain which is St. John's Island, was traced to veinlets in the peridotite which makes up the mountain. These veins were then followed by underground methods, and many stones produced. The veins consisted of serpentine which had resulted from alteration of the olivine in the peridotite, probably caused by warm solutions percolating up through cracks in the peridotite shortly after solidification. In places in this serpentine, these solutions apparently caused recrystallization of the olivine, and there the mineral was redeposited as crystals in the center of the vein. In some places the crystals of peridot were actually lining vugs, although individually coated with a thin, easily removable coat of serpentine. Mostly, though, they were frozen in the serpentine. Most of the peridot found and

(Continued on page 218)

"ME AND PA" — JUST TWO OLD ROCKHOUNDS

Dear Editor:

"When one can make a woman say anything is beautiful it must be a fact", such was Pa's outburst to an old Crony (Rockhound) while they were 'Window Shopping' over a State map and planning trips enough to last two cars two years or more. He had reference to some settings he had made me from some Jade from Wyoming Minerals, P.O. Box 266, Laramie, Wy., and I will have to admit that he was right, for once anyway and, as he puts it, "One may depend on that firm clean material and your money's worth."

But I took notes on something he raved about and that was my object in writing you which may interest those who are interested in displaying transparencies and the mounting of the specimens. Pa has been making flowers, owls, trees, butterflies and vases of his transparent specimens and I must say they take on beauty by displaying them in that manner but it is about the improved way he has of connecting the pieces that he has made such a fuss about. Here are his words and you can understand what he means better than I as I do nothing with the specimens he has except to admire them. It is just this, "In connecting two pieces together one should bevel the larger one on the underside where connection is to be made with a corresponding bevel of the other so that it may be slipped under far enough so that light will not show through to dis-

tract from the idea being illustrated. For instance, an owl's tail may be beveled so that it may slip under the limb on which you are placing it. The top of your vase is beveled underneath so that leaves may be made to look like they are in the vase. Or where any two pieces are to be made as one the bevel takes care of the fitting."

It is very likely that you will hear from me again soon as Pa is all agog over a new fluorescent light he just received from Warner and Grieger of Pasadena, Calif., together with some minerals which do show up wonderfully and I might say astoundingly. This Radarlite seems to be an outstanding improvement from those I have seen operate before and if what Pa says is of any importance I am sure anyone who gets one will not be disappointed. Pa has 'plans' as he says but just what those plans are in connection with this new light is something which he will not say for I received this answer when I asked.

"When a seed is planted tell no one for fear they may throw cold water on it and may cause it to die. When it sprouts you may see for yourself whether it is worth shouting about."

If that seed ever sprouts and causes an uproar you will hear about 'if and when'. Until then or something else turns up will close.

Sincerely,

Me, of the two old Rockhounds.

WHEATLEY MINE HEMATITE

By C. A. THOMAS

Nodules and water-worn lumps of hematite were recently discovered in an erosion-ditch in a field near the abandoned furnace at the Wheatley Lead Mines, Williams Corner just outside Phoenixville, Penn. These are dark red hematite of micaceous variety, the size of flakes varying in each water-worn pebble. Some foliated groups of crystals revealed upon fracturing a nodule are nicely translucent in bright spotted illumination, showing a deep blood-red. Some groups of the dark-red flakes make nice micro-mounts.

Nickel Occurrence in Alaska

Nickel is known to occur at a number of localities in Alaska but not in any good deposits. One interesting occurrence is on Yakobi Island where nickel-bearing sulfides, chalcopyrite, pentlandite, and pyrrhotite, are found as veins in a norite.

Yakobi Island is in southeastern Alaska, about 80 miles slightly northwest of Juneau, and so close to the northwestern corner of the large island of Chichagof that on some maps it seems to be a part of it. Yakobi is about 20 miles long, north and south, and about 10 miles wide.

The Amateur Lapidary

BRACELETS WITHOUT BEZELS—Part 2

By LUCILLE SANGER

The attractive colors and the ease with which abalone shells can be worked make them ideal for costume jewelry. Select material which will be reasonable when finished, and therefore solid and durable. This will necessitate a careful going over for wormholes which many times run nearly through the shell.

Find the exact length of the bracelet to be made and estimate the size of the shell segments to be used. It is better to make such a bracelet a little on the short side, as matching rings can be added to each end to increase the length. Allow space between the cabochons for three links.

Now cut the shell blanks and polish with tin oxide. They can be oval, round, square, diamond or rectangular in shape. Make them three-fourths to an inch and a quarter in length and polish the outside of the shell. Since the shell is curved, this will make the bracelet fit better and smoother. Not more than four or five will be needed for the bracelet but five or more will be needed to hang as charms. When cutting, it will save time if some "spare parts" are cut then as the shell can be easily burned in soldering and the cabochon need replacing.

A hole should be drilled in each shell at the end (or side) about an eighth of an inch from the edge, and a hole at just one end of the shells to be used as charms. This can be done with a small gauge steel twist drill. Mark off a space on the bench the exact length the bracelet is to be. Lay the fastener and jump ring in their proper places. Space the finished shells between them. If an assortment of ready-made links are at hand, it is just a matter of fitting them into the spaces allotted to them. If not, then estimate the size, keeping the links a little small.

Use a 20-gauge sterling wire and make ovals a little more than an eighth of an inch long. They should be wide enough

and just long enough to fit the hole, leave room for the round link and to move with ease. Now make some very small round links. An eighth of an inch should be large enough to join the two oval links, hold the round link for the charm and move freely when soldered. When the links are finished, solder enough round one to join the shells. If there are five cabochons in the bracelet, make four soldered round links. Slip another round link into each of these and solder. There are now four sets of round links joined together. One of these round links will hang down to hold the charm and the other will connect the two oval links fastened to the shells.

Take an oval link and slip it into a round link. Now put it through one of the holes in a shell and fit the ends together. Take another oval link and put it through the *same* round link, leaving the extra round link hanging down. Put it through the hole of another shell and fit the ends together. There are now two shells fastened together, with an extra round link on which a charm will later be fastened. Be sure to keep these charm links all on the same side so that the charms will all hang from the same side of the bracelet. Otherwise the bracelet will not hang properly or harmoniously and will present an awkward and unattractive appearance.

Bury each cabochon in wet asbestos cement, leaving the joint up in easy soldering position, keeping the joint clean and solder the links. Fasten all the shells together in this manner. Solder the links and fastener together for each end and then join with an oval link to the end shells. Solder the remaining two joints.

Add an oval to each charm and put the oval link through the round link made for it on the bracelet. When all the charms are added, bury all of the

bracelet, except the unsoldered joints, in asbestos cement and solder.

It is needless to say that such a piece cannot be pickled. Use a fine emery paper and polish with that. Give a final polish with rouge on a muslin wheel and wash.

For those who consider soldering such a piece too risky, or for those who lack experience or facilities, the links can be fitted together and left unsoldered. However, if at all possible, the links holding the sister hook and jump ring should be soldered. This can be done before they are added to the bracelet. This much (or little) soldering would be good practice for a beginner. Before they are joined to the bracelet they should be pickled and polished on the muslin wheel, then fastened to the bracelet. In a bracelet which is made with unsoldered links, polishing must be done by hand as a muslin buff will catch in the joints and tear them out.

If the links are to be left unsoldered, it is very important that they be cut from the mandrel very carefully. For soldered links, the coil may be slipped from the mandrel after annealing and cut with snippers, but for the unsoldered links, saw them very carefully from the mandrel and do not anneal.

When the bracelet has been washed and dried after polishing, it is ready to wear.

YOSEMITE TRIP

By PASADENA, JR. COLLEGE

The traditional Easter excursion of the geology classes of Pasadena Junior College, combined with the Mineralogical Society of Southern California, will be held this year in Yosemite Valley, April 13 to 18. The group will be led again by Edwin Van Amringe, assistant professor of geology, who has been conducting these trips for over fifteen years, without even wartime interruption. It was from these tours and from other activities at Pasadena Junior College that the M.S.S.C., pioneer mineralogical group of the West, came into being. The return of many alumni from service and the phenomenal growth of the college indicates a record attendance for the excursion.

Mudgee, Australia, Diamond Occurrence

Diamonds have been known to occur in Australia since 1860 and one of the earliest localities was Mudgee, in New South Wales, where the gem was first found in 1867 in the gold placer mines. Here the gem occurred as rolled pebbles in the gravels of the Cudgegong River.

Spinel, sapphires, rubies, and zircons have also been found as small rolled pebbles with the diamonds. Gold, of course, also occurs and many nice nuggets have been taken during mining operations. When gold is plentiful, the gravels are worked as a gold mine; when diamonds become plentiful, then it becomes a diamond mine.

Mudgee is 130 miles northwest of Sydney in eastern New South Wales of southeastern Australia. The little town is on the Cudgegong River which runs generally west into the Macquarie River and that again northwest into the Darling River.

Sydney, population 1,300,000, the capital of New South Wales, is the largest city in Australia.

Chrysoprase First Found in Germany

Chrysoprase is a variety of chalcedony (a variety of quartz) having chiefly an apple-green or leek-green color due to a trace of nickel. It is much used as a gem stone and for ornaments as it takes a beautiful polish.

The mineral was first found in Lower Silesia at Kosemutz in veins traversing serpentine and associated with chalcedony, green opal, and quartz. It is still abundant at the locality from which many specimens are sent to the United States. Kosemutz is south of Breslau in south-east Germany.

It has been said that chrysoprase was first discovered by a Prussian officer near a mill on the Kosemutz mountains in 1740.¹

The name chrysoprase is derived from two Greek words meaning "golden leek" on account of the yellowish-green color of the first found specimens.

1 *Precious stones and gems*, by Edwin W. Streeter, Chapman & Hall, London, 1877, p. 194.

Club and Society Notes

Los Angeles Lapidary Society

The plans for a great show May 4—June 28 by the Los Angeles Lapidary Society are rapidly shaping under the chairman of the exhibit, Mr. Fred Rugg and his corps of able assistants.

The directors of the L. A. County Museum are making every effort in cooperating with the committee to make this show the most outstanding one ever held by amateur lapidaries.

The nine competitive classes with their many sub-classes will bring out the best stones produced by our members. In addition there will be about sixty cases for general display which are not in competition. On May 4 and 5 the different lapidary machines will be in operation and thus show the various stages in the fashioning of stones. Come and enjoy this show!

Charles G. Schweitzer, Publicity
5933 Miramonte Boulevard
Los Angeles 1, California

Mineralogical Society of Arizona

The annual convention of the Rocky Mountain Federation of Mineral Societies was held in Phoenix, Ariz., on March 7, 8, and 9, 1946. The Mineralogical Society of Arizona was host.

Yavapai Gem and Mineral Society

A description of Peru and its mining districts was given by T. E. Harper in a talk at the February meeting of the Yavapai Gem and Mineral Society. A. De Angelis gave some new and interesting information about gem stones and their making. Outstanding exhibits were gems by De Angelis, prehistoric fossils from Colorado by Shattuck Jones, synthetic jet and malachite by J. Bryant Kasey, and a fluorescent mineral display by Moulton B. Smith.

Ida Smith, Sec.
Prescott, Ariz.

Mineralogical Society of So. California

A regular meeting of the Society was held on March 11, 1946, at the Public Library, Pasadena, Calif. Kilian Bensusan was the speaker whose subject was "Gold and gem stone mining in Brazil."

Marquette Geologists Association

A regular meeting of the Association was held on March 2, 1946, at the Academy of Sciences, Chicago, Ill. Prof. Frank Fleener was the speaker whose subject was "Uranium minerals and atomic power". Dr. John Ball's "Short lessons in geology" was also featured.

Queens Mineral Society

The Society held its regular monthly meeting on March 7, 1946, at Richmond Hill, N. Y. An excellent talk on the structure of the atom was given by Frank Lewis, a member of the Club.

Ruth Grotheer, Secretary

Rochester Academy of Science (Mineralogical Section)

A regular meeting of the Section was held on March 14, 1946, at the Rochester Museum of Arts and Sciences, Rochester, N. Y. The program consisted of a description, held by R. C. Vance, on the properties of minerals depending on light: play of color, iridescence, opalescence, tarnish, asterism, pleochroism.

Wisconsin Geological Society

A regular meeting of the Club was held on March 4, 1946, at the Milwaukee Public Library, Milwaukee, Wisc. The speaker for the meeting was G. N. Knapp, whose subject was "The Rocky Mountains".

North Jersey Mineral Society

The 12th meeting of the Society was held on March 12, 1946, at the Paterson Museum, Paterson, N. J. The speaker was John S. Albanese, a returned veteran of the war in the South Pacific, whose subject was "Volcanoes of the Hawaiian Islands".

Newark Mineralogical Society

The 239th meeting of the Society was held on March 3, 1946, in the Newark Museum, Newark, N. J. The meeting was devoted to a talk by Gene Vitali, assisted by Edwin F. Judd, the topic was "Tourmaline of Mt. Mica, Maine".

Boston Mineral Club

A regular meeting of the Club was held on March 5, 1946, at the New England Museum of Natural History, Boston, Mass. The speaker was Eberhardt Heinrich whose subject was "Mineral collecting in Colorado".

Colorado Mineral Society

A regular meeting of the Society was held on March 1, 1946, at the Colorado School of Mines, Golden, Colo., where Dr. J. Harlan Johnson, Professor of Geology, guided the group through the geological and mineralogical museum.

Mineralogical Society of the District of Columbia

A regular meeting of the Society was held on March 15, 1946, at the U. S. National Museum, Washington, D. C. The speaker was Tony Rapp, a veteran from the European theatre of war, who spoke on some European mineral localities especially those on the Island of Elba.

Northern California Mineral Society

Four meetings and a field trip were held by the Society during March, 1946. On March 1st, a business meeting was held. On March 8th, a micromount meeting. On March 17th, field trip to Corral Hollow where very nice opalized wood was found. On March 20th, general meeting at the Public Library, San Francisco, Calif. On March 29th, a lapidary night.

Mineralogical Society of Southern Nevada

Dr. William S. Park, one of the first professional men to come to Las Vegas, Nevada, and an expert on archaeology, died of a heart attack Sunday afternoon, March 24, 1946, at the Boulder City Hospital.

He was on a field trip with the Mineralogical Society of Southern Nevada, of which he was a charter member, when he was stricken. His companion on the trip was Bilt Brown of Las Vegas. They had driven about 15 miles east of Boulder Dam and were searching for moss agates near Detrital Wash in the vicinity of Bonelli Landing in Arizona. After a hearty lunch, Dr. Park complained to Brown that he was not feeling well, and at Brown's suggestion they started home. Because the road was rough, Brown was not able to drive fast until they reached the Boulder City-Kingman highway. Realizing that Dr. Park was getting weaker, Brown stopped at the checking station at the west entrance to the Dam and asked rangers there to telephone the Boulder City Hospital for a doctor to be on hand when they arrived. Dr. Park was able to walk into the hospital with the assistance of Brown and nurses. As treatment was begun, a nurse remarked to Dr. Park that he had a busy day. Dr. Park replied, "It has been a beautiful day. I don't know when I've had a more restful day". With that the second attack struck him, and he died instantly.

Dr. Park was born January 12, 1879, in Richmond, Kentucky, and came to Las Vegas in 1907.

When Dr. Harrington of the Southwest Museum of Los Angeles came to Las Vegas to excavate the Gypsum Cave for early historical artifacts, Dr. Park became interested in archaeology as a hobby. He developed into an avid student of the subject, devoting much time to scientific study and field trips. He became an authority without parallel on the early Basketmaker tribe which inhabited the Muddy and Virgin river valleys in prehistoric times. He excavated in the "Lost City" area of the St. Thomas area, now under the waters of Lake Mead, and saved many of the archaeological artifacts, which otherwise would have been sent to museums outside the state of Nevada.

In his spacious home, Dr. Park had one room as a museum. There he had a large collection of pottery which he had restored after painstaking search for each tiny piece of the broken pots. Many items which are unavailable in any museum are in his collection. Another hobby was the collection of agates, petrified wood, and unusual stones. In his home, he had one room set up as a workshop, with all equipment needed for cutting and polishing the stones. This part of his collection is both beautiful and valuable.

One unfinished piece of work which had been of special interest to him, was a map of the state of Nevada. In a small framework outlining the state, he had drawn the shape of each county and had gathered stone typical

of each county and cut and polished them to fit the county. Only three counties remained to complete the "state in stone".

Friends who knew Dr. Park in the Mineralogical Society of Southern Nevada, sent to the funeral a huge heart of deep orange Calceolarias surrounded by green fern and tied with a beautiful bow of purple satin ribbon. Purple and Gold being the colors of the Society.

The Mineralogical Society of Southern Nevada has resumed activities in a big way.

Since the first meeting of the Society in several years on February 4, 1946, 38 new members have been taken in and five field trips held.

Average attendance on the field trips have been 32 persons. On February 10, the Society visited the old silver mines in the Ghost Town of White Hills, Arizona.

February 17, 1946—Beautiful selenite crystals and moss agates were found in Detrital Wash, near Bonelli's Landing on the shore of Lake Mead in Arizona.

The following Sunday, the Society again journeyed into Detrital Wash to visit ancient petroglyphs on canyon walls.

March 3rd trip was near Boulder City, Nevada to the Onyx beds north of the Quo Vadis Mine and then to Dry Lake where Scolicite crystals, the Society emblem, were found.

March 10th the Society visited Las Vegas Wash and the Manganese Ore Co. property where lovely apple green and dark green jadeite was found.

Trips to old turquoise mines and locations of orthoclase crystals are planned for the next few weeks.

Paul Mercer, Secretary
P.O. Box 925
Boulder City, Nev.

East Bay Mineral Society

Two meetings of the Society were held during March, 1946. On March 7th, Prof. Earle G. Linsley was the speaker whose subject was "The Goose Lake Meteorite". On March 21st, W. E. McKittrick addressed the Society and his subject was "Minerals and igneous activity".

The Society meets at the Auditorium, Lincoln School, Oakland, Calif.

Texas Mineral Society

The February and March meetings of our Society have been very enjoyable.

Through arrangement of one of our members, who visited the mercury mines and that district of Terlingua, Texas, we had the pleasure of receiving an approval shipment of specimens from that area. There were some truly fine and rare minerals in the shipment and many of our members bought additional specimens for their collections.

A most attractive and crowd-stopping window display of mineral specimens in one of the downtown store windows was furnished by the members of our Club and many nice comments have come from it.

A. O. Phipps, Secretary

New York Mineralogical Club

American Museum of Natural History, New York, N. Y., Wednesday, February 20, 1946.

The meeting was called to order by the President at 8:00 p.m. Mr. Jeff Hill, Mrs. Irma Kent, Mr. Hubert Seaman, and Mr. Hugh A. Ford were elected to membership.* The membership committee had no other report. There was no report of the excursion committee and no unfinished business.

Dr. Holmes reported that Dr. Kerr will edit Mr. Trainer's paper on the *Minerals of Tilly Foster* for club publication. He also announced new publications:

An article in the *American Mineralogist* by Winchell on Knoop Micro-hardness Tester and one in a British Mineralogical magazine on the Sawing and Cleaning of Diamonds which was somewhat related to the Winchell article.

A Bulletin of the University of Missouri, *Common Rocks and Minerals of Missouri*. A very elementary publication.

Pyrite deposits of Missouri by Prof. Grewe, published by the Missouri Geological Survey. Very well illustrated and very complete. Recommended.

Pennsylvania's Mineral Heritage (Economic Geology)—Published by the State Geological Survey.

Dr. Kindel then asked the club to purchase an Elliot Addressing Machine. The cost would be about \$180. Mr. Taylor moved that it be purchased, the motion was seconded and voted.

Dr. Kindel then proposed an amendment to the Constitution:

To Article IV, Section 3—Add: A MEMBER WHO HAS PAID DUES TO THE CLUB FOR THIRTY-FIVE YEARS SHALL BE A LIFE MEMBER.

The business of the meeting was declared finished and Mr. Lee introduced the speaker of the evening, Professor E. Jacobs of the University of Vermont, and State geologist of Vermont.

Professor Jacobs told us that Vermont produced the most monumental granite and asbestos in the United States, as well as large quantities of marble, slate, talc. A small amount of gold has also been recovered from various parts of the state. He then listed the minerals found in Vermont with their localities. Some of these we knew and had collected—talc, pyrite, magnetite, actinolite from Chester, etc., but most of the minerals were new to us as being found in Vermont. An unusual locality is at Mt. Mansfield where franklinite is found, at South Strafford where copper is mined commercially, and especially at Mt. Belvidere where excellent specimens of dark gemmy terminated vesuvianite crystals have been found in a pegmatite dike in a talc and asbestos quarry.

Respectfully submitted,
Mrs. E. J. Marcin, Sec'y.

Wellesley Mineral Club

A new organization has recently been formed in Wellesley, Mass., known as the Wellesley Mineral Club which was started in December, 1945, with a nucleus of a small group comprising both amateur and professional mineralogists and mineral collectors.

The objective of this promising group is to meet regularly each month as a club, for the discussion and dissemination of mineralogical knowledge and experiences. The activities of the Wellesley Mineral Club will cover actual prospecting field trips to mineral and gem material localities in New England, also informal lectures and talks by members and guest speakers on minerals, mineral collecting, gem cutting and lapidary work, fluorescent minerals, micro-mineralogy and trips to various museums. Co-operation with other mineral clubs and societies whose activities are related indirectly to various Universities and Colleges and State Development groups is included in its activity. During the war, many members of similar mineral clubs rendered valuable services to our Government and the Bureau of Mines in locating strategic minerals for the war effort.

The Wellesley Mineral Club further aims to be of assistance to local Wellesley school groups such as to High School students, the Boy Scouts and the Girl Scouts (merit badges can be attained on this subject), and others interested in this practical and growing movement.

Membership is open to all Wellesley residents over 18 years of age. The last meeting was held in the Geology Building at Wellesley College at 8 p.m. on the evening of March 28th. Miss Louise Kingsley, and Miss Alice Douse both of whom are associated with the Departments of Geology and Mineralogy of Wellesley College, served as hostesses at the March 28th meeting when the mineral collection of the College was opened to members and their guests.

Respectfully submitted,
M. D. Bogart,
36 Bay View Rd., Wellesley
(Acting Chairman)
Tel. Wel. 3109

Pacific Mineral Society

A dinner meeting of the Society was held on March 8, 1946, at the Elada Restaurant in Los Angeles, Calif. Jack Streeter was the speaker whose subject was "Collecting minerals in Brazil".

Nebraska Mineralogy and Gem Club

The annual dinner meeting of the Club was held at the Paxton Hotel, Omaha, Nebr., on March 27, 1946, at 7:00 p.m. Moving pictures showing scenes in the Yellowstone National Park were the chief feature of the meeting while a special attraction to many members was the examination of fused sand from the site of the atomic bomb experiment in New Mexico.

Western Lapidary and Jewelry Society

Organization meetings of a new Valley cultural society, the Western Lapidary and Jewelry Society, have recently been completed. Regular meetings will be held the 4th Wednesday of each month, at 7:30 in the evening, in the Roscoe Recreation Center, on Vineland just south of San Fernando Road, Burbank, Calif.

The aims of the new society, according to Cash Ferguson, acting president, are best exemplified by Article II of the Society's Constitution, which reads as follows:

ARTICLE II**Objects**

The objects of the Society shall be

- (a) to collect and study precious and semi-precious stones and gems
- (b) to disseminate a general knowledge of the cutting, polishing and engraving of precious and semi-precious stones and gems
- (c) to disseminate a general knowledge of the art of jewelry making
- (d) to provide special classes of instruction in the lapidary and jewelry arts for the physically handicapped
- (e) to provide special classes of instruction in the lapidary and jewelry arts for junior members
- (f) to provide opportunity for exhibition and exchange of gems and jewelry
- (g) to encourage social relations among Members and the exchange of ideas regarding lapidary and jewelry subjects

Classes will be held in all branches of the lapidary and jewelry arts. This educational program has been designed to include detailed instruction covering every step of the jeweler's art, from the cutting of a rough gem, through its shaping and polishing, and to its final setting in a piece of jewelry fabricated by the member himself. Beginners will experience no difficulty in learning to cut and polish gems, and to set them in jewel mounts.

Special attention will be given to the physically handicapped. The value of this work for the partially disabled is inestimable, and many who have taken up the hobby as an avocation have ended up in a remunerative vocation. Many of the Veteran's Hospitals hold classes in this work. At Birmingham Hospital Cash Ferguson taught lapidary work one-half day per week for a year and a half. He was ably assisted in his work there by his wife, Melba, who taught the boys how to fashion jewelry.

Another aim of the Society which is worthy of mention is the program planned for junior members. It is believed that instruction in lapidary and jewelry making will start many of the young members on a worthwhile life-long hobby, and that it may help in some small measure to keep them off the streets by furnishing them with interesting spare-time work. If the demand warrants, classes for the physically handicapped and for juniors will be organized throughout the Valley. The first re-

gular meeting of the Society was held Wednesday evening, March 7. All persons interested in gems and jewelry, whether novice or expert, are cordially invited to attend.

Mary C. McClure
903 N. Lima St.
Burbank, Calif.

Worcester Mineral Club

The Worcester, Mass., Mineral Club members, on Saturday, January 12, 1946, enjoyed an afternoon at the Research Laboratory of Norton Company, one of the world's largest manufacturers of grinding wheels and abrasives. The visit was arranged by Mrs. Nyquist, a member of both the Norton research staff and the Worcester Mineral Club. They were met by Dr. Thibault, of Norton Company, with Mrs. Thibault, who is also a member of the club, and were welcomed by A. Albert Klein, Asst. Director of Research, who presented each visitor with a gift from Norton Company. The club members took advantage of the invitation to use the equipment of the laboratory, and thoroughly enjoyed themselves grinding and polishing mineral specimens and cabochons.

On Monday evening, January 21, instead of a regular meeting, the club met at Clark University, the guests of Dean Little. The Dean had a very good display of mineral and geological specimens laid out, and spent a very busy evening answering the many questions asked by the enthusiastic group.

Both of these visits added much to the pleasure of mineral education of the Club members.

Miss Susan G. Ayres, Sec.

Minnesota Mineral Club

A new Club, the Minnesota Mineral Club, has been organized here in the Twin Cities. We began in December, 1945, and we now have 65 members from all over Minnesota.

We are holding our first Annual Exhibition of member's work and collections April 14th, from 1-9 p.m., in the Curtis Hotel, Minneapolis. Visitors from other cities will be very welcome.

The next regular monthly meeting will be held in the same hotel, the night before the Exhibit, April 13th. Mrs. Virginia Tasker Kent, teacher of Art Metalcraft at the Miller Vocational High School of Minneapolis, will talk on design in hand-made jewelry. She has taken post graduate work at the University of Wisconsin, and at the Kunstgewerbe Schule of Vienna, Austria, where she specialized in art metal work.

President of the new Club is William Bingham, of St. Paul; Vice-President, Adolph Heumann, of Minneapolis; Secretary, Mrs. B. G. Dahlberg, Minneapolis; Treasurer, Arthur Anderson, Minneapolis.

B. G. Dahlberg, Publicity Director
3537 Oakland Ave.
Minneapolis 7, Minn.

Central Iowa Mineral Club

Through the publicity given by *The Register and Tribune* to the mineral collections exhibited by Mrs. R. G. Hays and Frank Sadilek, the interest in forming a mineral club crystallized on Friday evening, March 8, 1946, and the Central Iowa Mineral Club was organized. Forty people interested in minerals, in one way or another, have either joined or expressed their desire to do so. Regular meetings are to be held the first Friday evening of each month at the Y.M.C.A., Des Moines, Iowa, and field trips are to be planned through the summer.

One dollar of each membership fee goes toward the support of a Junior "Y" mineral club and the study of minerals at the "Y" summer camp.

The members and officers of the Central Iowa Mineral Club welcome Iowa collectors and polishers to join us until a club located more conveniently to them can be formed.

Address all communications to the Secretary, Mrs. R. G. Hays, 1330-66th, Des Moines 11, Iowa.

C. W. Yaggy, President

New Jersey Mineralogical Society

Dr. James Hillier, RCA Laboratories, Princeton, N. J., was the speaker at the March 5, 1946, meeting. The subject of Dr. Hillier's talk was "The electron microscope — a new tool for the scientist."

The Society meets at the Plainfield Library, Plainfield, N. J.

Monterey Bay Mineral Society

At our February 11th, 1946, meeting held at the Y.M.C.A., Salinas, Calif., nine more rock-hounds applied for membership, bringing our Society's membership total to 68. We've gone quite a distance from our beginning of 14 members.

Our speaker was J. Lewis Renton, Vice-President of the Northern California Mineral Society of San Francisco, who showed his beautiful color slides of thunder-eggs, agates and other minerals and pointed out their characteristic coloring and structure typical of specific area. It was an excellent program and we felt very fortunate to have had Mr. Renton at this late date as he is moving permanently to Portland March 1st.

Mr. A. L. Jarvis, of Watsonville, was elected Federation Director to represent our Society at the California Federation of Mineralogical Societies' meetings.

Mr. and Mrs. Samuelson of Salinas donated a beautifully cut and polished heart-shaped specimen of agate for raffle to swell the Society's treasury and hereafter at each meeting specimens donated by members will be raffled.

Mr. Hugh Brown, representative of the Western Mineral Exchange, talked briefly on the *American Mineral Guide* and showed his fluorescent display under a mineral light, and exhibited cutting material and equipment.

Mrs. A. W. Flippin
Secretary

Chicago Rocks and Minerals Society

A new mineral and lapidary society was organized on Feb. 16, 1946, at its headquarters in Sauganash Park Field House, 5861 N. Kostner Ave., Chicago 30, Ill. There were 20 present at its organization and the following officers were elected: President, Geo. A. Anderson; Secretary, Beverly La Buda; Treasurer, C. H. Anderson. The Society will meet on the 2nd Saturday of every month at 8:00 p.m., at the Field House where a fully equipped lapidary shop will accommodate about 20 people.

At the March 9th meeting, Mrs. Lucille Sanger gave an interesting talk on cutting miniatures. There were 18 members present at this meeting who selected the following name for their Club — Chicago Rocks and Minerals Society. It was suggested and passed that the Society become affiliated with the Rocks and Minerals Association.

Geo. C. Anderson, President

Gem Stone Collectors of Utah

At the meeting of "Gem Stone Collectors of Utah" held March 21, 1946, each member introduced himself and told how far he has progressed and what his interests are in rock collecting and cutting. A field trip to collect agate was planned for March 31. Immediately following each meeting, a miniature rock market place is set up where members can buy, sell, or swap materials.

Reported by:

Ila Nelson, Secretary

Augite in Fiji Islands

Some very fine loose black crystals of augite (pyroxene) occur in the Tavua goldfield on the northern coast of the island of Viti Levu, the largest island in the Fiji group. Quite a number of these crystals have found their way to America where they have been distributed among collectors and museums.

Collecting in the Middle East

(Continued from page 210)

mined there for gems is in irregular masses, and good crystals are in the minority. Crystals found in recent years are generally better than those in the older collections, as, having been derived from underground methods, they have brilliant faces and sharp edges and are free of the wear and corrosion characteristic of the peridot mined alluvially.

In November, 1943, I left Egypt for India, and that ended my collecting in the Middle East.

... With Our Dealers ...

Gilbert W. Withers, of Atlanta, Ga., will intrigue many collectors with his elephant and buddhas carved out of amethyst, citrine, garnet, and other minerals.

Marvin's Rock Shop, of Durango, Colo., cannot give mail orders the attention they deserve so they are dropping that end of the business. But they would be delighted to have you call on them — visitors are always welcome.

Mrs. B. F. Nonneman, of Salinas, Calif., has some more colorful cabochon material in stock. You must order some of it.

The Black Hawk Trading Post, of Black Hawk, Colo., can supply wholesale nice Indian style jewelry.

More choice specimens from the huge stock of Hatfield Goudey, of Yerington, Nev., appear in his ad in this issue.

A Speed-Ex gem drill and crystal plastic mountings for semi-precious gems are featured in the two ads of Futura Studio, of Miles City, Mont.

Diamond saws, disc sanders, mineral identification sets, books, etc., are this month's offerings of Long Beach Mineral and Lapidary Supply Co., of Long Beach, Calif.

Another series of fine specimens are again advertised by the Wiener Mineral Co., of Tucson, Ariz.

The Whispering Wind Press, of Phoenix, Ariz., is again with us and again A. L. Flagg's interesting book is featured. Mr. Flagg is one of the southwest's most colorful figures and well known in mineralogical circles, being president of both the Mineralogical Society of Arizona and the Rocky Mountain Federation of Mineral Societies.

Do you like specimens with fascinating fluorescence? L. B. Pringle, of Little Rock, Ark., has them in stock.

Rough amethyst — good material for cutting — is available from Herbert Sussbach, of New York, N. Y.

Do you like mineral sets? Elliott Gem Shop, of Long Beach, Calif., has them in stock.

If you need gem quality Arizona agates, jaspers, petrified wood, you should order from Chas. E. Hill, of Phoenix, Ariz.

E. W. Martin, of Ann Arbor, Mich., is home again from his western trip. He brought back with him some very fine material.

J. Harry Howard, of Greenville, S. C., who is the pioneer amateur lapidary of America will soon release his new book — *Revised Lapidary Handbook*. It was Mr. Howard's initial publication, *The Working of Semi-Precious Stones*, published in 1931, that started amateurs in the country to cut and polish their own minerals and gems.

Cabochons and slabs and fine minerals in general are all carried in stock by Chuck Jordan, of Sepulveda, Calif.

The J. J. Jewellcraft, of Montrose, Calif., have some rare black opal doublets from Australia. Better order some.

A new advertiser this month is Gems of the Rockies, of Colorado Springs, Colo. This is a lapidary establishments and it will cut your stones as well as supply those already cut.

Have you a cat-eye gem from the Pacific in your collection? Graffham's Commercial Museum, of Ottawa, Kans., can supply them as well as other items.

If rare aluminum ores are needed for your collection the H. E. Powell Co., of Little Rock, Ark., can supply them.

Uncommon smoky quartzes are featured this month by the Erskine Collection, of La Jolla, Calif.

Some attractive items for the hobbyist are listed this month by Arthur and Lucille Sanger, of Chicago, Ill. Better look them over.

Another new advertiser is Minerals, Ltd., of Yonkers, N. Y. This is a new firm and it is desirous of purchasing sawed slabs for industrial ornamental purposes.

Would you like to buy some West Texas colored banded agate? Frank Duncan and Daughter, of Terlingua, Texas, have some choice specimens in stock.

Here is something you need for your fluorescent collection — a picture designed with fluorescent minerals! Thompson's Studio, of Pomona, Calif., can supply them.

Coming soon — the latest lapidary invention! This is the caption for the ad of the Mountain Gem & Supply Co., of Durango, Colo., a new advertiser.

Lapidary bargains while they last are again featured by Utility Supply Inc., of Topeka, Kans. Take advantage of them!

Have you a handsome Elba pyrite xl in your collection? Sh—h—h! Schortmann's Minerals, of Easthampton, Mass., just got in a small shipment but don't tell anyone that we told you about it. Shake a leg and get one before they are all gone!

Hurrah for New York City! A mineral store has at last been opened in the world's largest city. Hugh A. Ford, a collector who is widely known in mineralogical circles, is the owner.

Paging all Irish collectors! Green quartz crystals may be obtained from J. L. Davis & Son, of Hot Springs, Ark.

Grieger's of Pasadena, Calif., have just released their 1946 Victory Catalog.

Allan Branham, of Lander, Wyo., who specializes in jade, gives you an opportunity this month to add some to your collection.

Collectors Items — every one of them — are those specimens listed this month by Ward's, of Rochester, N. Y. Have a look-see!

Another diamond saw machine, known as the "True-Cut", has been placed on the market by the Gem Stone Mining Co., of Durango, Colo. See their ad on it!

Some more nice high-grade specimens of Colorado carnotite have been acquired by the Pan-American Mining Co., of Bayfield, Colo.

Do you need a good faceting head? Read the ad of Lloyd M. Demrick, of San Francisco, Calif. He may have just the item you want. He also has other lapidary items.

The famous "Streamliner" diamond sawing machine advertised by Wilfred C. Eyles, of Bayfield, Colo., has just arrived from the factory and has been placed on sale. Have you ordered your machine?

Roberts & Stevens, of Monterey Park, Calif., have that English hematite which you have been looking for!

Nice Nevada turquoise can be obtained from C. A. Holliday, of Battle Mountain, Nev.

The Aztec Gem Shop, of Miami, Ariz., can supply polished Arizona gems wholesale to the jewelry trade.

Cpl. Walter H. Printz, has reopened his Yaquina Gem Shop in Newport, Ore., and is all ready for business.

A list of fine minerals appear this month from the stock of John S. Albanese, of Newark, N. J. Don't be too long in ordering as the specimens will not last long.

Smith's Agate Shop, of Portland, Ore., can supply diamond saws, blank mountings, and other lapidary material.

Some gem classics by Keweenaw Agate Shop, of Ahmeek, Mich., appear in this issue; the Toledo Variable Speed Transmission is also featured.

New Mexico Piedras, of Santa Fe, N. Mex., who specialize in opals, can supply other gem materials as tourmalines, agates, etc.

The Multicraft Shop, of St. Paul, Minn., can supply ladies silver rings in various styles and mountings.

The new price list of the Gem Exchange, Lake Bluff, Ill., just received. It's a GEM! Doubled in size, illustrated and using the new wonderful fluorescent ink. It contains many new offerings and a number of surprises. A postal brings it!

Fulgurite in New Jersey

Fulgurites are little tubes of glassy rock found chiefly in sand deposits; these tubes have been fused from wet sand by lightning during severe electrical storms. The name fulgurite is derived from the Latin for thunderbolt. Fulgurite is also known as silica glass.

Fulgurites have been found at a number of localities in New Jersey and have been exposed during excavations in sands. These glassy tubes often extend many feet in the sand but being very fragile, very thin, and seldom exceeding 1/4 inch in diameter, pieces of any length are obtained with great difficulty. Fulgurites are generally grayish in color and often have tiny grains of the enclosing sand attached to them.

Among the localities where fulgurites have been found are: North Vineland, in northern Cumberland County, (very interesting specimens); Glassboro, in central part of Gloucester County, (nice specimens); Milltown, Perth Amboy, Sayreville, South Amboy, and South River — all in Middlesex County.

Cumberland and Gloucester Counties are in the southern part of the state while Middlesex County is in the eastern part.

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